

REMARKS

The Office Action mailed on October 31, 2006 has been received and reviewed. Claims 1-26 remain in the case. Claims 1-7, 9-12, 15-17, 19 and 20 were rejected under 35 U.S.C. 102(b) as being anticipated by Testardi (6,249,882), hereinafter simply Testardi. Claims 8, 13, 18, and 25 were rejected under 35 USC 103(a) as being unpatentable over Testardi in view of Rosenberg (Jonathan B. Rosenberg, "How debuggers work").

In light of the rejections, a review of the present invention may help clarify the novelty of the Applicants' claims over the cited prior art. As shown in Figures 2-4 an apparatus for debugging source code enables a user to invoke selected initialization routines corresponding to a particular function within a source code debugger in order to initialize a target environment to a state suitable for executing the function and observing its performance with a debugger. The apparatus may include a function selector configured to generate an execution request and a task dispatcher configured to dispatch the initialization routines in response to the execution request. In certain embodiments, the function selector generates the execution request in response to selection of the target function by a user.

Much of the utility of the present invention arises from the relationship between the target function and the initialization routines. The correspondence between the initialization routines and the target functions may be set (i.e. hardwired) or user selectable (*see paragraph 43*) and therefore may be dynamically adjusted to according to user preference and need. More than one set of initialization routines may be associated with a target function. The initialization routines may include function independent routines (suitable for use with any target function) as well function dependent routines (suitable for use with specific target functions). The initialization routines may both be developed using the same programming languages and tools as the application source code used to generate the target functions that are being tested. Furthermore, compiled initialization routines and compiled target functions may co-exist as compiled binary files within the system under test and selectively paired and executed (*see Figures 2 and 3 and the associated description*).

In contrast to the present invention, the cited prior art extracts test directives and parameters that are embedded as comments within the source code files of an application (*see the Abstract of Testardi as well as Figure 1 and the associated description in col. 5 line 48 to col. 6 line 44*). The

test directives are interpreted by an interpreter 110 in order to initialize the environment and construct a command script that is executed by the debugger 112 (*see also col. 10 lines 4-52*).

One particular disadvantage of Testardi as understood by the Applicants is that the relationship between the test directives and the code being tested is fixed within the source code.

Regarding the rejection of claims 1, 9, 15, 19, and 21 under 35 U.S.C. 102(b), Applicants have amended claim 1 to read “the at least one initialization routine selectively coupled ~~corresponding~~ to a target function within a target application”. Applicants assert that the amendment emphasizes the dynamic relationship between the initialization routines and the selected target function that is attainable with the present invention. Support for the amendment is found in the last sentence of paragraph 43 and elsewhere. Similar amendments were made to claims 9, 15, 19, and 21. Applicants respectfully request allowance of the aforementioned claims.

Regarding the rejection of claims 5, 11, and 17, Applicants assert that Testardi does not disclose “initialization routines configured to initialize the environment to a particular state ... [that] corresponds to an Application error”. Rather, Testardi in general, and specifically element 216 and the related text cited by the Examiner, discloses displaying an error message in response to an Application error. Applicants therefore assert that claims 5, 11, and 17 represent novel and non-obvious improvements and that claims 5, 11, and 17 are in condition for allowance as currently presented.

Regarding the rejection of claims 6, 10, 16, and 20, Applicants assert that Testardi does not disclose “a deployed system configured to dump information used to initialize the target environment to the particular state” in that “deployed” refers to a system that is put into use or action for its intended purpose *i.e.* a system that is functioning in the field (see the definition for deployed at www.dictionary.com). Applicants assert that Testardi discloses dumping information from a system under development or testing and not a system that is functioning in the field. Applicants therefore assert that claims 6, 10, 16, and 20 represent novel and non-obvious improvements and that claims 6, 10, 16, and 20 are in condition for allowance as currently presented.

Regarding the rejection of claims 7 and 12, Applicants assert that Testardi does not disclose “wherein the at least one initialization routine comprises a function independent initialization routine and a function dependent initialization routine.” Rather Testardi discloses specific test sequences

written for specific function inputs (black box testing) or specific code structures within a function (white box testing). In other words all of the test sequences disclosed by Testardi are function dependent test sequences. This function dependence contrasts with the present invention which enables the use of a routine of both general purpose (function independent) initialization routines and function specific (function dependent) initialization routines. Applicants therefore assert that claims 7 and 12 represent novel and non-obvious improvements and that claims 7 and 12 are in condition for allowance as currently presented.

CONCLUSION

The present invention enables the use of an arsenal of initialization routines that can be selectively applied to selected target functions. The prior art does not provide such flexibility. Applicants therefore assert that claims 1-21 (particularly in light of the clarifying amendments) represent novel and non-obvious improvements and respectfully request prompt allowance thereof.

Respectfully submitted,

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